

NEUROENDOCRINE RESPONSE AFTER SELF-INJURIOUS BEHAVIOR IN DEVELOPMENTALLY DELAYED PATIENTS.

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A pilot study examined plasma levels of β -endorphin (β E), ACTH, and cortisol in severely to profoundly mentally retarded patients with moderate to severe self-injurious behavior (SIB). Paired samples for each subject were collected immediately following an SIB episode and again at the same time on a subsequent day when no SIB was evident. Across the treatment condition (repeated measures) β E ($r=0.58$), ACTH ($r=0.64$), and cortisol ($r=0.56$) were significantly correlated, ie. subjects with higher values during SIB also had higher values without SIB. No significant correlations were found between the 3 variables across conditions. Within SIB and non-SIB conditions no significant correlations were found between β E and cortisol or between β E and ACTH. ACTH and cortisol were significantly correlated under non-SIB conditions ($r=0.60$), as might be expected. In contrast, no significant correlation between ACTH and cortisol was found following an SIB episode ($r=0.35$). The results suggest the presence of an abnormal regulatory mechanism for cortisol secretion during periods of SIB. Further analyses (in progress) will attempt to determine if this dysregulation occurs at the hypothalamic or adrenal levels.